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3D data and models related to the publication: An updated description of the osteology of the pancake tortoise *Malacochersus tornieri* (Testudines: Testudinidae) with special focus on intraspecific variation

Mautner, Anna-Katharina ; Latimer, Ashley E ; Fritz, Uwe ; Scheyer, Torsten M

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3D data and models related to the publication: An updated description of the osteology of the pancake tortoise *Malacochersus tornieri* (Testudines: Testudinidae) with special focus on intraspecific variation

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Abstract

The present publication contains the µCT dataset and the 3D models analyzed in the following publication: Mautner, A.-K., A. E. Latimer, U. Fritz, and T. M. Scheyer. An updated description of the osteology of the pancake tortoise *Malacochersus tornieri* (Testudines: Testudinidae) with special focus on intraspecific variation. Journal of Morphology. <https://doi.org/10.1002/jmor.20640>

Keywords: brain endocast, chelonian shell, micro computed tomography, morphology, variability

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Model IDs	Taxon	Description
M3#129_ZM 100.102	<i>Malacochersus tornieri</i>	Virtual brain and inner ear endocast.
M3#130_ZM 100.102	<i>Malacochersus tornieri</i>	µCT data set (resolution: 36µm)

Table 1. List of models

INTRODUCTION

The inner ear and brain endocast (Fig. 1) using micro CT scan data is part of a revised osteological analysis of the pancake tortoise *Malacochersus tornieri* (Mautner et al., 201X). This tortoise has a very flat shell, which allows the animal to hide in cracks and under rocks in its natural habitat, i.e. rocky arid shrub and thorny brush environments in Tanzania and adjacent countries in eastern Africa (e.g., Procter, 1922).

METHODS

The 3D surfaces were extracted by manually labeling cranial spaces within AVIZO (FEI). The 3D surface models are provided in .ply format that can be opened with a wide range of freeware viewers. In addition the 3D dataset that was used for the 3D modeling is provided as well.

ACKNOWLEDGEMENTS

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BIBLIOGRAPHY

Mautner, A.-K., A. E. Latimer, U. Fritz, and T. M. Scheyer (201X). An updated description of the osteology of the pancake tortoise *Malacochersus tornieri* (Testudines: Testudinidae) with special focus on intraspecific variation. Journal of Morphology. <https://doi.org/10.1002/jmor.20640>

Procter, J. B., 1922. A study of the remarkable tortoise, *Testudo loveridgii* Blgr., and the morphogeny of the chelonian carapace. Proceedings of the Zoological Society of London Pt. 3 No. 34, 483-526. <https://doi.org/10.1111/j.1096-3642.1922.tb02155.x>

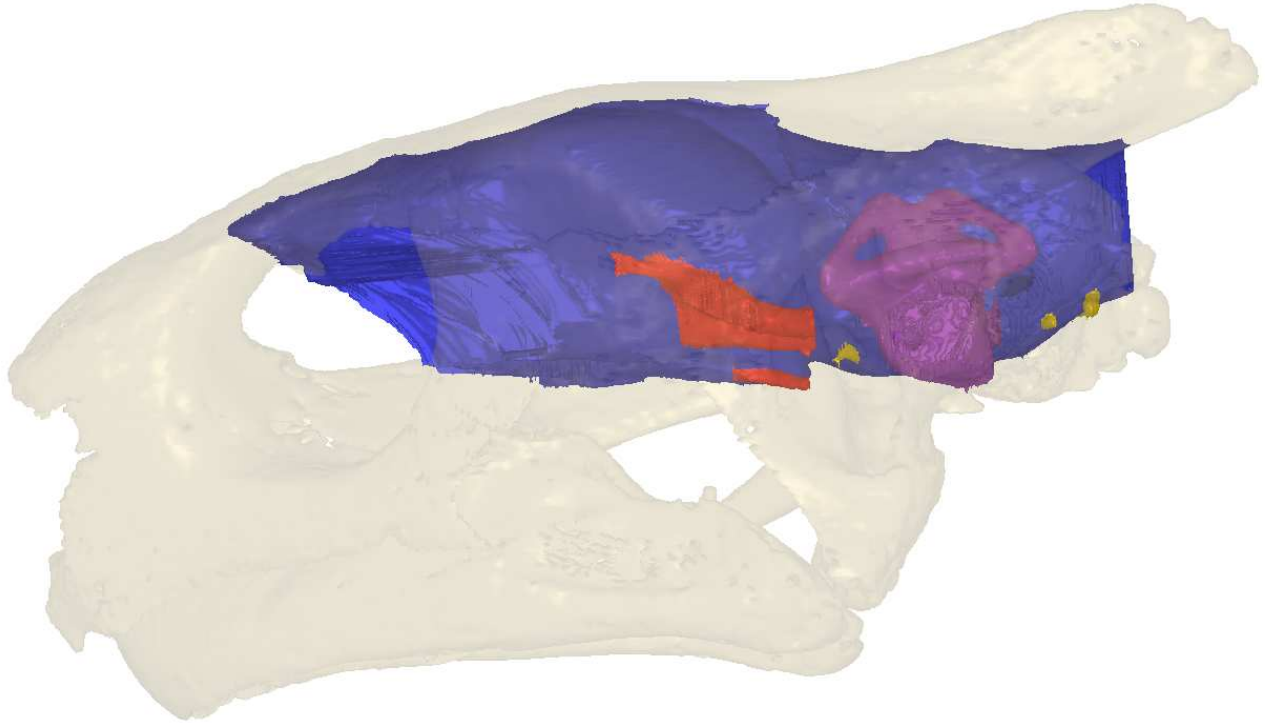


Figure 1. Virtual brain and inner ear endocast of *Malacochersus tornieri* (ZM 100.102; Zoological Museum of the University of Zürich). Blue, endocranium; red, blood vessels; purple, semicircular canals; yellow, cranial nerves.